

## **RAW SEQUENCE LISTING**

**The Biotechnology Systems Branch of the Scientific and Technical  
Information Center (STIC) no errors detected.**

Application Serial Number: 10/579,117  
Source: IFWP  
Date Processed by STIC: 5/25/06

# ***ENTERED***

## CRF Errors Edited by the STIC Systems Branch

Serial Number: 10/579,117

CRF Edit Date: 5/25/06  
Edited by: AE

\_\_\_ Realigned nucleic acid/amino acid numbers/text in cases where the sequence text "wrapped" to the next line

\_\_\_ Corrected the SEQ ID NO. Sequence numbers edited were:

\_\_\_\_\_

\_\_\_ Inserted or corrected a nucleic number at the end of a nucleic line. SEQ ID NO's edited:

\_\_\_\_\_

J Deleted: J invalid beginning/end-of-file text ; \_\_\_ page numbers

\_\_\_ Inserted mandatory headings/numeric identifiers, specifically:

\_\_\_\_\_

\_\_\_ Moved responses to same line as heading/numeric identifier, specifically:

\_\_\_\_\_

\_\_\_ Other:

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_



IFWP

## RAW SEQUENCE LISTING

DATE: 05/25/2006

PATENT APPLICATION: US/10/579,117

TIME: 11:28:10

Input Set : A:\PTO.AMC.txt

Output Set: N:\CRF4\05252006\J579117.raw

```

3 <110> APPLICANT: ASTRAZENECA AB
5 <120> TITLE OF INVENTION: CARBOXYPERTIDASE U (CPU) MUTANTS
7 <130> FILE REFERENCE: LDG/101278
C--> 9 <140> CURRENT APPLICATION NUMBER: US/10/579,117
C--> 9 <141> CURRENT FILING DATE: 2006-05-11
9 <160> NUMBER OF SEQ ID NOS: 19
11 <170> SOFTWARE: PatentIn version 3.2
13 <210> SEQ ID NO: 1
14 <211> LENGTH: 1269
15 <212> TYPE: DNA
16 <213> ORGANISM: Homo sapiens
18 <400> SEQUENCE: 1
19 atgaagcttt gcagccttgc agtccttgta cccattgttc tcttctgtga gcagcatgtc      60
21 ttcgcgtttc agagtggcca agttctagct gctcttcccta gaacctctag gcaagttcaa      120
23 gttctacaga atcttactac aacatatgag attgttctct ggcagccggt aacagctgac      180
25 cttattgtga agaaaaaaca agtccatttt tttgtaaatt catctgatgt cgacaatgtg      240
27 aaagcccatt taaatgtgag cgggaattcca tgcagtgtct tgctggcaga cgtggaagat      300
29 cttattcaac agcagatttc caacgacaca gtcagccccc gagcctccgc atcgtactat      360
31 gaacagtatc actcactaaa tgaaatctat tcttggatag aatttataac tgagaggcat      420
33 cctgatatgc ttacaaaaat ccacattgga tctctatttg agaagtacc cactctatgtt      480
35 ttaaagggtt ctggaaaaga acaagcagcc aaaaatgcc a tatggattga ctgtggaatc      540
37 catgccagag aatggatctc tctgtcttgc tgcttggttg tcataggcca tataactcaa      600
39 ttctatggga taatagggca atataccaat ctcttgaggc ttgtggattt ctatgttatg      660
41 ccggtgggta atgtggatgg ttatgactac tctgtggaaa agaatcgaat gtggagaaaag      720
43 aaccgttctt tctatgcgaa caatcattgc atcggaaacag acctgaatag gaactttgct      780
45 tccaaacact ggtgtgagga aggtgcatcc agttcctcat gctcggaaac ctactgtgga      840
47 ctttatcctg agtcagaacc agaagtgaag gcagtggcta gtttcttgag aagaaatata      900
49 aaccagatta aagcatacat cagcatgcat tcatactccc agcatatagt gtttccatat      960
51 tcctatacac gaagtaaaaag caaagaccat gaggaactgt ctctagtagc cagtgaagca      1020
53 gttcgtgcta ttgagaaaac tagtaaaaat accaggata cacatggcca tggctcagaa      1080
55 accttatacc tagtcctgag aggtggggac gattggatct atgatttggg catcaaatat      1140
57 tcgtttacaa ttgaacttcg agatacgggc acatacggat tcttgctgcc ggagcgttac      1200
59 atcaaaccce cctgtagaga agcttttgcc gctgtctcta aaatagcttg gcatgtcatt      1260
61 aggaatgtt
64 <210> SEQ ID NO: 2
65 <211> LENGTH: 423
66 <212> TYPE: PRT
67 <213> ORGANISM: Homo sapiens
69 <400> SEQUENCE: 2
71 Met Lys Leu Cys Ser Leu Ala Val Leu Val Pro Ile Val Leu Phe Cys
72 1          5          10          15
75 Glu Gln His Val Phe Ala Phe Gln Ser Gly Gln Val Leu Ala Ala Leu
76          20          25          30

```

## RAW SEQUENCE LISTING

DATE: 05/25/2006

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Input Set : A:\PTO.AMC.txt

Output Set: N:\CRF4\05252006\J579117.raw

```

79 Pro Arg Thr Ser Arg Gln Val Gln Val Leu Gln Asn Leu Thr Thr Thr
80      35      40      45
83 Tyr Glu Ile Val Leu Trp Gln Pro Val Thr Ala Asp Leu Ile Val Lys
84      50      55      60
87 Lys Lys Gln Val His Phe Phe Val Asn Ala Ser Asp Val Asp Asn Val
88 65      70      75      80
91 Lys Ala His Leu Asn Val Ser Gly Ile Pro Cys Ser Val Leu Leu Ala
92      85      90      95
95 Asp Val Glu Asp Leu Ile Gln Gln Gln Ile Ser Asn Asp Thr Val Ser
96      100      105      110
99 Pro Arg Ala Ser Ala Ser Tyr Tyr Glu Gln Tyr His Ser Leu Asn Glu
100      115      120      125
103 Ile Tyr Ser Trp Ile Glu Phe Ile Thr Glu Arg His Pro Asp Met Leu
104      130      135      140
107 Thr Lys Ile His Ile Gly Ser Ser Phe Glu Lys Tyr Pro Leu Tyr Val
108 145      150      155      160
111 Leu Lys Val Ser Gly Lys Glu Gln Ala Ala Lys Asn Ala Ile Trp Ile
112      165      170      175
115 Asp Cys Gly Ile His Ala Arg Glu Trp Ile Ser Pro Ala Phe Cys Leu
116      180      185      190
119 Trp Phe Ile Gly His Ile Thr Gln Phe Tyr Gly Ile Ile Gly Gln Tyr
120      195      200      205
123 Thr Asn Leu Leu Arg Leu Val Asp Phe Tyr Val Met Pro Val Val Asn
124      210      215      220
127 Val Asp Gly Tyr Asp Tyr Ser Trp Lys Lys Asn Arg Met Trp Arg Lys
128 225      230      235      240
131 Asn Arg Ser Phe Tyr Ala Asn Asn His Cys Ile Gly Thr Asp Leu Asn
132      245      250      255
135 Arg Asn Phe Ala Ser Lys His Trp Cys Glu Glu Gly Ala Ser Ser Ser
136      260      265      270
139 Ser Cys Ser Glu Thr Tyr Cys Gly Leu Tyr Pro Glu Ser Glu Pro Glu
140      275      280      285
143 Val Lys Ala Val Ala Ser Phe Leu Arg Arg Asn Ile Asn Gln Ile Lys
144      290      295      300
147 Ala Tyr Ile Ser Met His Ser Tyr Ser Gln His Ile Val Phe Pro Tyr
148 305      310      315      320
151 Ser Tyr Thr Arg Ser Lys Ser Lys Asp His Glu Glu Leu Ser Leu Val
152      325      330      335
155 Ala Ser Glu Ala Val Arg Ala Ile Glu Lys Thr Ser Lys Asn Thr Arg
156      340      345      350
159 Tyr Thr His Gly His Gly Ser Glu Thr Leu Tyr Leu Ala Pro Gly Gly
160      355      360      365
163 Gly Asp Asp Trp Ile Tyr Asp Leu Gly Ile Lys Tyr Ser Phe Thr Ile
164      370      375      380
167 Glu Leu Arg Asp Thr Gly Thr Tyr Gly Phe Leu Leu Pro Glu Arg Tyr
168 385      390      395      400
171 Ile Lys Pro Thr Cys Arg Glu Ala Phe Ala Ala Val Ser Lys Ile Ala
172      405      410      415
175 Trp His Val Ile Arg Asn Val

```

## RAW SEQUENCE LISTING

DATE: 05/25/2006

PATENT APPLICATION: US/10/579,117

TIME: 11:28:10

Input Set : A:\PTO.AMC.txt

Output Set: N:\CRF4\05252006\J579117.raw

```

176          420
179 <210> SEQ ID NO: 3
180 <211> LENGTH: 52
181 <212> TYPE: DNA
182 <213> ORGANISM: Artificial
184 <220> FEATURE:
185 <223> OTHER INFORMATION: Oligonucleotide Primer
187 <400> SEQUENCE: 3
188 tgctctagag cggccgcggg atgaagcttt gcagccttgc agtccttgta cc          52
191 <210> SEQ ID NO: 4
192 <211> LENGTH: 60
193 <212> TYPE: DNA
194 <213> ORGANISM: Artificial
196 <220> FEATURE:
197 <223> OTHER INFORMATION: Oligonucleotide Primer
199 <400> SEQUENCE: 4
200 atgatgatgc ttatcgatcat cgtccccggg ctcgagaaca ttctaataga catgccaagc          60
203 <210> SEQ ID NO: 5
204 <211> LENGTH: 64
205 <212> TYPE: DNA
206 <213> ORGANISM: Artificial
208 <220> FEATURE:
209 <223> OTHER INFORMATION: Oligonucleotide Primer
211 <400> SEQUENCE: 5
212 cggggtacct tattaagatc cactatgatg atgatgatga tgatgatgct tatcgatcatc          60
214 gtcc          64
217 <210> SEQ ID NO: 6
218 <211> LENGTH: 66
219 <212> TYPE: DNA
220 <213> ORGANISM: Artificial
222 <220> FEATURE:
223 <223> OTHER INFORMATION: Oligonucleotide Primer
225 <400> SEQUENCE: 6
226 ggggacaagt ttgtacaaaa aagcaggctt caccatgaag ctttgcagcc ttgcagtcct          60
228 tgtacc          66
231 <210> SEQ ID NO: 7
232 <211> LENGTH: 66
233 <212> TYPE: DNA
234 <213> ORGANISM: Artificial
236 <220> FEATURE:
237 <223> OTHER INFORMATION: Oligonucleotide
239 <400> SEQUENCE: 7
240 ggggaccact ttgtacaaga aagctgggtc ctaagatcca ctatgatgat gatgatgatg          60
242 atgatg          66
245 <210> SEQ ID NO: 8
246 <211> LENGTH: 18
247 <212> TYPE: DNA
248 <213> ORGANISM: Artificial
250 <220> FEATURE:

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## RAW SEQUENCE LISTING

DATE: 05/25/2006

PATENT APPLICATION: US/10/579,117

TIME: 11:28:10

Input Set : A:\PTO.AMC.txt

Output Set: N:\CRF4\05252006\J579117.raw

```

251 <223> OTHER INFORMATION: Oligonucleotide Primer
253 <400> SEQUENCE: 8
254 acccattggt ctcttctg                                     18
257 <210> SEQ ID NO: 9
258 <211> LENGTH: 20
259 <212> TYPE: DNA
260 <213> ORGANISM: Artificial
262 <220> FEATURE:
263 <223> OTHER INFORMATION: Oligonucleotide Primer
265 <400> SEQUENCE: 9
266 ttggtcttgc tggaatcagt                                   20
269 <210> SEQ ID NO: 10
270 <211> LENGTH: 57
271 <212> TYPE: DNA
272 <213> ORGANISM: Artificial
274 <220> FEATURE:
275 <223> OTHER INFORMATION: Oligonucleotide Primer
277 <400> SEQUENCE: 10
278 ccaagcttca tcccaacagc aattttctct agatctggtg aagctggagc tacggag   57
281 <210> SEQ ID NO: 11
282 <211> LENGTH: 18
283 <212> TYPE: DNA
284 <213> ORGANISM: Artificial
286 <220> FEATURE:
287 <223> OTHER INFORMATION: Oligonucleotide Primer
289 <400> SEQUENCE: 11
290 tgccaaaggg gcggtccc                                     18
293 <210> SEQ ID NO: 12
294 <211> LENGTH: 422
295 <212> TYPE: PRT
296 <213> ORGANISM: Mus musculus
298 <400> SEQUENCE: 12
300 Met Lys Leu His Gly Leu Gly Ile Leu Val Ala Ile Ile Leu Tyr Glu
301 1          5          10          15
304 Gln His Gly Phe Ala Phe Gln Ser Gly Gln Val Leu Ser Ala Leu Pro
305          20          25          30
308 Arg Thr Ser Arg Gln Val Gln Leu Leu Gln Asn Leu Thr Thr Thr Tyr
309          35          40          45
312 Glu Val Val Leu Trp Gln Pro Val Thr Ala Glu Phe Ile Glu Lys Lys
313          50          55          60
316 Lys Glu Val His Phe Phe Val Asn Ala Ser Asp Val Asp Ser Val Lys
317 65          70          75          80
320 Ala His Leu Asn Val Ser Arg Ile Pro Phe Asn Val Leu Met Asn Asn
321          85          90          95
324 Val Glu Asp Leu Ile Glu Gln Gln Thr Phe Asn Asp Thr Val Ser Pro
325          100         105         110
328 Arg Ala Ser Ala Ser Tyr Tyr Glu Gln Tyr His Ser Leu Asn Glu Ile
329          115         120         125
332 Tyr Ser Trp Ile Glu Val Ile Thr Glu Gln His Pro Asp Met Leu Gln

```

## RAW SEQUENCE LISTING

PATENT APPLICATION: US/10/579,117

DATE: 05/25/2006

TIME: 11:28:10

Input Set : A:\PTO.AMC.txt

Output Set: N:\CRF4\05252006\J579117.raw

```

333      130      135      140
336 Lys Ile Tyr Ile Gly Ser Phe Glu Lys Tyr Pro Leu Tyr Val Leu
337 145      150      155      160
340 Lys Val Ser Gly Lys Glu Gln Arg Ile Lys Asn Ala Ile Trp Ile Asp
341      165      170      175
344 Cys Gly Ile His Ala Arg Glu Trp Ile Ser Pro Ala Phe Cys Leu Trp
345      180      185      190
348 Phe Ile Gly Tyr Val Thr Gln Phe His Gly Lys Glu Asn Leu Tyr Thr
349      195      200      205
352 Arg Leu Leu Arg His Val Asp Phe Tyr Ile Met Pro Val Met Asn Val
353      210      215      220
356 Asp Gly Tyr Asp Tyr Thr Trp Lys Lys Asn Arg Met Trp Arg Lys Asn
357 225      230      235      240
360 Arg Ser Ala His Lys Asn Asn Arg Cys Val Gly Thr Asp Leu Asn Arg
361      245      250      255
364 Asn Phe Ala Ser Lys His Trp Cys Glu Lys Gly Ala Ser Ser Ser Ser
365      260      265      270
368 Cys Ser Glu Thr Tyr Cys Gly Leu Tyr Pro Glu Ser Glu Pro Glu Val
369      275      280      285
372 Lys Ala Val Ala Asp Phe Leu Arg Arg Asn Ile Asp His Ile Lys Ala
373      290      295      300
376 Tyr Ile Ser Met His Ser Tyr Ser Gln Gln Ile Leu Phe Pro Tyr Ser
377 305      310      315      320
380 Tyr Asn Arg Ser Lys Ser Lys Asp His Glu Glu Leu Ser Leu Val Ala
381      325      330      335
384 Ser Glu Ala Val Arg Ala Ile Glu Ser Ile Asn Lys Asn Thr Arg Tyr
385      340      345      350
388 Thr His Gly Ser Gly Ser Glu Ser Leu Tyr Leu Ala Pro Gly Gly Ser
389      355      360      365
392 Asp Asp Trp Ile Tyr Asp Leu Gly Ile Lys Tyr Ser Phe Thr Ile Glu
393      370      375      380
396 Leu Arg Asp Thr Gly Arg Tyr Gly Phe Leu Leu Pro Glu Arg Tyr Ile
397 385      390      395      400
400 Lys Pro Thr Cys Ala Glu Ala Leu Ala Ala Ile Ser Lys Ile Val Trp
401      405      410      415
404 His Val Ile Arg Asn Thr
405      420
408 <210> SEQ ID NO: 13
409 <211> LENGTH: 422
410 <212> TYPE: PRT
411 <213> ORGANISM: Rattus norvegicus
413 <400> SEQUENCE: 13
415 Met Lys Leu Tyr Gly Leu Gly Val Leu Val Ala Ile Ile Leu Tyr Glu
416 1      5      10      15
419 Lys His Gly Leu Ala Phe Gln Ser Gly His Val Leu Ser Ala Leu Pro
420      20      25      30
423 Arg Thr Ser Arg Gln Val Gln Leu Leu Gln Asn Leu Thr Thr Thr Tyr
424      35      40      45
427 Glu Val Val Leu Trp Gln Pro Val Thr Ala Glu Phe Ile Glu Lys Lys

```

RAW SEQUENCE LISTING ERROR SUMMARY      DATE: 05/25/2006  
PATENT APPLICATION:    US/10/579,117      TIME: 11:28:11

Input Set : A:\PTO.AMC.txt  
Output Set: N:\CRF4\05252006\J579117.raw

Invalid <213> Response:

Use of "Artificial" only as "<213> Organism" response is incomplete,  
per 1.823(b) of New Sequence Rules. Valid response is Artificial Sequence.

Seq#:3,4,5,6,7,8,9,10,11,14,15,16



**VERIFICATION SUMMARY**

PATENT APPLICATION: US/10/579,117

DATE: 05/25/2006

TIME: 11:28:11

Input Set : A:\PTO.AMC.txt

Output Set: N:\CRF4\05252006\J579117.raw

L:9 M:270 C: Current Application Number differs, Replaced Current Application No

L:9 M:271 C: Current Filing Date differs, Replaced Current Filing Date

**Raw Sequence Listing before editing  
(for reference only)**



IFWP

## RAW SEQUENCE LISTING

DATE: 05/23/2006

PATENT APPLICATION: US/10/579,117

TIME: 14:27:02

Input Set : A:\Carboxypertidase U (CPU) Mutants.txt

Output Set: N:\CRF4\05232006\J579117.raw

3 <110> APPLICANT: ASTRAZENECA AB  
 5 <120> TITLE OF INVENTION: CARBOXYPERTIDASE U (CPU) MUTANTS  
 7 <130> FILE REFERENCE: LDG/101278  
 C--> 9 <140> CURRENT APPLICATION NUMBER: US/10/579,117  
 C--> 9 <141> CURRENT FILING DATE: 2006-05-11  
 9 <160> NUMBER OF SEQ ID NOS: 19  
 11 <170> SOFTWARE: PatentIn version 3.2

## ERRORED SEQUENCES

**Does Not Comply**  
**Corrected Diskette Needed**

795 <210> SEQ ID NO: 19  
 796 <211> LENGTH: 423  
 797 <212> TYPE: PRT  
 798 <213> ORGANISM: Homo sapiens  
 800 <400> SEQUENCE: 19

802 Met Lys Leu Cys Ser Leu Ala Val Leu Val Pro Ile Val Leu Phe Cys  
 803 1 5 10 15  
 806 Glu Gln His Val Phe Ala Phe Gln Ser Gly Gln Val Leu Ala Ala Leu  
 807 20 25 30  
 810 Pro Arg Thr Ser Arg Gln Val Gln Val Leu Gln Asn Leu Thr Thr Thr  
 811 35 40 45  
 814 Tyr Glu Ile Val Leu Trp Gln Pro Val Thr Ala Asp Leu Ile Val Lys  
 815 50 55 60  
 818 Lys Lys Gln Val His Phe Val Asn Ala Ser Asp Val Asp Asn Val  
 819 65 70 75 80  
 822 Lys Ala His Leu Asn Val Ser Gly Ile Pro Cys Ser Val Leu Leu Ala  
 823 85 90 95  
 826 Asp Val Glu Asp Leu Ile Gln Gln Gln Ile Ser Asn Asp Thr Val Ser  
 827 100 105 110  
 830 Pro Arg Ala Ser Ala Ser Tyr Tyr Glu Gln Tyr His Ser Leu Asn Glu  
 831 115 120 125  
 834 Ile Tyr Ser Trp Ile Glu Phe Ile Thr Glu Arg His Pro Asp Met Leu  
 835 130 135 140  
 838 Thr Lys Ile His Ile Gly Ser Ser Phe Glu Lys Tyr Pro Leu Tyr Val  
 839 145 150 155 160  
 842 Leu Lys Val Ser Gly Lys Glu Gln Ala Ala Lys Asn Ala Ile Trp Ile  
 843 165 170 175  
 846 Asp Cys Gly Ile His Ala Arg Glu Trp Ile Ser Pro Ala Phe Cys Leu  
 847 180 185 190  
 850 Trp Phe Ile Gly His Ile Thr Gln Phe Tyr Gly Ile Ile Gly Gln Tyr  
 851 195 200 205  
 854 Thr Asn Leu Leu Arg Leu Val Asp Phe Tyr Val Met Pro Val Val Asn

## RAW SEQUENCE LISTING

PATENT APPLICATION: US/10/579,117

DATE: 05/23/2006

TIME: 14:27:03

Input Set : A:\Carboxypertidase U (CPU) Mutants.txt

Output Set: N:\CRF4\05232006\J579117.raw

```

855      210      215      220
858 Val Asp Gly Tyr Asp Tyr Ser Trp Lys Lys Asn Arg Met Trp Arg Lys
859 225      230      235      240
862 Asn Arg Ser Phe Tyr Ala Asn Asn His Cys Ile Gly Thr Asp Leu Asn
863      245      250      255
866 Arg Asn Phe Ala Ser Lys His Trp Cys Glu Glu Gly Ala Ser Ser Ser
867      260      265      270
870 Ser Cys Ser Glu Thr Tyr Cys Gly Leu Tyr Pro Glu Ser Glu Pro Glu
871      275      280      285
874 Val Lys Ala Val Ala Ser Phe Leu Arg Arg Asn Ile Asn Gln Ile Lys
875      290      295      300
878 Ala Tyr Ile Ser Met His Ser Tyr Ser Gln His Ile Val Phe Pro Tyr
879 305      310      315      320
882 Ser Tyr Thr Arg Ser Lys Cys Lys Asp His Glu Glu Leu Ser Leu Val
883      325      330      335
886 Ala Ser Glu Ala Val Arg Ala Ile Glu Lys Thr Ser Lys Asn Thr Arg
887      340      345      350
890 Tyr Thr Tyr Gly Gln Gly Ser Glu Thr Leu Tyr Leu Ala Pro Gly Gly
891      355      360      365
894 Gly Asp Asp Trp Ile Tyr Asp Leu Gly Ile Lys Tyr Ser Phe Thr Ile
895      370      375      380
898 Glu Leu Arg Asp Thr Gly Thr Tyr Gly Phe Leu Leu Pro Glu Arg Tyr
899 385      390      395      400
902 Ile Lys Pro Thr Cys Arg Glu Ala Phe Ala Ala Val Ser Lys Ile Ala
903      405      410      415
906 Trp His Val Ile Arg Asn Val
907      420

```

E--&gt; 913 101278

E--&gt; 915 - 1 -

RAW SEQUENCE LISTING ERROR SUMMARY

DATE: 05/23/2006

PATENT APPLICATION: US/10/579,117

TIME: 14:27:04

Input Set : A:\Carboxypertidase U (CPU) Mutants.txt

Output Set: N:\CRF4\05232006\J579117.raw

Invalid <213> Response:

Use of "Artificial" only as "<213> Organism" response is incomplete,  
per 1.823(b) of New Sequence Rules. Valid response is Artificial Sequence.

Seq#:3,4,5,6,7,8,9,10,11,14,15,16

**VERIFICATION SUMMARY**

PATENT APPLICATION: US/10/579,117

DATE: 05/23/2006

TIME: 14:27:04

Input Set : A:\Carboxypertidase U (CPU) Mutants.txt

Output Set: N:\CRF4\05232006\J579117.raw

L:9 M:270 C: Current Application Number differs, Replaced Current Application No

L:9 M:271 C: Current Filing Date differs, Replaced Current Filing Date

L:913 M:332 E: (32) Invalid/Missing Amino Acid Numbering, SEQ ID:19

M:332 Repeated in SeqNo=19